STAT 499/699 Computational Finance

Syllabus for 499/699:

Instructor: Dr. Katherine Ensor,
With additional participation by interested faculty and scholars

Educational Purpose: Students in STAT 499/699 Computational Finance will be exposed to the broad array of computational finance research taking place on campus and in the larger scientific and business communities. Further, students will acquire a deeper understanding of a specific topic area in quantitative finance. The specific area changes by semester and includes topics such as resources for quantitative finance; security of financial markets; detecting and mitigating systemic risk; the role of analytics and statistics in the broader energy markets.

The quantitative finance topic is selected at the beginning of the semester. Students are assigned specific readings around the topic and class time is spent on group discussions of these papers.

Format: Bi-weekly group discussions + attending quantitative finance seminars on campus or in the larger Houston area.

Assignments and grading:

- Students will be expected to actively participate in the bi-weekly group discussions and will be graded on that participation. Further, students are required to submit individual written summaries of the bi-weekly group discussions.
- Students are also expected to attend a minimum of four quantitative finance seminars. Written summaries of each seminar is required.

Additional requirement for STAT 699 (graduate students):

Students registered for STAT 699 will be required to develop a group presentation around the bi-weekly discussions. The presentation should be sufficiently descriptive that future students studying quantitative finance can efficiently understood the issues and the current state-of-the-art on the chosen topic. When appropriate students will be asked to submit a white paper to the department archival paper network. STAT 499 students will be invited to contribute to the presentation and paper, but leadership is expected from the STAT 699 students.

Variable credit: Any student registered for more than one credit hour is expected to conduct independent research culminating in a poster presented at the department end of semester poster session as well as a white paper on the research.